

III. REMARKS

A. Status of the Claims

Claims 1-7 and 10-21 were pending in this application, and all claims have been rejected. Claims 1, 2, 3, 4, 10, 11, 12, 14, 16, 18, 19, 20 and 21 have been amended to more particularly claim various embodiments of the invention. Claims 6 and 15 have been canceled.

Claims 8 and 9 were previously canceled.

New claims 22-24 have been added. Support for new claim 22 can be found, at least, in the specification as originally filed, and in original claim 19. Support for new claim 23 can be found, at least, in the specification as originally filed, and in original claim 18. Support for new claim 24 can be found, at least, in the specification as originally filed, and in original claim 17.

Applicants believe that *no new matter has been added* with these amendments.

Accordingly, upon the entry of the present amendment, claims 1 to 5, 7, 10 to 14, and 16-24 remain pending.

Applicants respectfully contend that the foregoing claim amendments should in no way be construed as acquiescence to any of the rejections set forth in the Final Office Action, and were made solely in an effort to expedite prosecution and allowance of the present application. Entry of the foregoing Amendments and Response is respectfully in order and requested. Applicants reserve the right to pursue the claims as originally filed in this or in separate applications.

B. Office Action's remarks to Applicants' previous response filed June 16, 2008

The Office Action asserts that the Applicants' arguments filed June 16, 2008 have been fully considered but are deemed not persuasive.

- i) Claims 1-7 and 10-15 remain rejected as allegedly unpatentable under 35 USC §103(a) over EP 1,068,901 to *Deguchi* (hereinafter "*Deguchi*") in view of U.S. Patent No. 6,482,304 to *Emery* (hereinafter "*Emery*").
- ii) Claims 16-19 remain rejected as allegedly unpatentable under 35 USC §103(a) over *Deguchi* in view of *Emery* (hereinafter "*Emery*") as applied to the claims above, and further in view of U.S. Patent No. 6,284,124 to *DiMascio et al.* (hereinafter "*DiMascio*").
- iii) Claims 20-21 remain rejected as allegedly unpatentable under 35 USC §103(a) over *Deguchi* in view of *Emery* (hereinafter "*Emery*") as applied to the claims above, and further in view of U.S. Patent Pub. No. 2002/0144954 to *Arba et al.* (hereinafter "*Arba*").

C. 35 USC §103 Rejections

1. Claims 1-7 and 10-15 remain rejected as allegedly unpatentable under 35 USC §103(a) over *Deguchi* in view of *Emery*. According to the Final Office Action, relying on the 35 USC §103(a) rejection applied in the Office Action dated January 11, 2008, *Deguichi* discloses an electrodeionization device providing a first and second flow path comprising a plurality of alternating depletion and concentration compartments, each compartment having a plurality of ion concentration channels capable of allowing the migration of ions into the fluid passing therethrough when a current is generated between said anode and cathode assemblies. The Office Action dated January 11, 2008 asserted that each depletion compartment is configured such that fluid brought thereinto flows in to each ion concentration channel *substantially sequentially*. However, the Office Action dated January 11, 2008 admits that *Deguchi* fails to disclose the use of conduits to connect deionization channels, but alleges that *Emery* teaches that conduits are routinely used to connect deionization channels in an electrodeionization unit.

Applicants respectfully traverse this rejection for the following reasons.

The Patent and Trademark Office (PTO) bears the burden of initially establishing a *prima facie* case of obviousness. MPEP §2142. The standard required to establish a *prima facie* case of obviousness is as follows: "First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine what the reference teaches. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim limitations." The Supreme Court has recently instructed that the analysis of an obviousness finding must be made explicitly part of the record. *KSR International Co. v. Teleflex Inc.* (2007) (Slip Op. at page 4). Applicants respectfully contend that the Office has not met its burden in this case.

Applicants respectfully contend that the conduits allegedly disclosed in *Emery* would not be successful if used in conjunction with the deionization cells of *Deguchi* because *Deguchi* suggests that the lateral flow of water is needed to improve contact efficiency. *Deguchi* states:

The electrodeionization apparatus of the present invention has desalting compartments, each of which is divided into a plurality of cells by a partition member, and an ion exchanger is filled in the respective cells. At least a part of the partition member facing the cell is inclined relative to a normal flow direction of the water in the desalting compartment. . . Therefore at least a part of the water flowing into the desalting compartment should flow obliquely relative to the normal flow direction of water so that the water is dispersed overall the desalting compartment (*Deguchi* page 2, paragraph [0012]. (See also paragraph [0036])).

If conduits were provided at the bottom of each of *Deguchi*'s cells (which would always be the case except for the bottom row of cells) the lateral flow of the water would be lost and thus the efficiency suggested by *Deguchi* (paragraph [009]) would be lost. Accordingly, Applicants respectfully submit using conduits in the *Deguchi* apparatus would not be successful and thus the suggested combination is not *prima facie* obvious.

Turning to claim 16, Applicants note that claim 16 recites, in part "the average size of the resin beads in the concentration compartments being substantially smaller than the average size of resin beds in the depletion compartments." Applicants respectfully contend that *Deguchi* does not disclose this element. Applicants previously requested that the Office points out specifically where *Deguchi* discloses that the average size of the resin beads in the concentration compartments are substantially smaller than the average size of resin beds in the depletion compartments. To date the Office has not pointed to any passage in *Deguchi* that discloses this element. Moreover, *Emery* does nothing to cure this defect. Applicants respectfully request reconsideration and withdrawal of the rejection of claim 16 and its dependencies.

2. Claims 16-19 remain rejected as allegedly unpatentable under 35 USC §103(a) over *Deguchi* in view of *Emery* (hereinafter "*Emery*") as applied to the claims above, and further in view of US Patent No. 6,284,124 to *DiMascio et al.* (hereinafter "*DiMascio*").

3. Claims 20-21 remain rejected as allegedly unpatentable under 35 USC §103(a) over *Deguchi* in view of *Emery* (hereinafter "*Emery*") as applied to the claims above, and further in view of U.S. Patent Pub. No. 2002/0144954 to *Arba et al.* (hereinafter "*Arba*").

The Final Office Action admits that *Deguchi* fails to disclose the monolithic framework as claimed, with channels and inlets as defined therein, but alleges that *Arba* discloses these of such a framework to produce the benefits obtained the use thereof. (see examples 1 and 2 on page 4). Consequently, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of *Deguchi* with the teaching of *Arba* because *Arba* discloses the benefits obtained by the use of a monolithic framework in an electrodeionization cell.

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IV. CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the reconsideration and withdrawal of the rejections. It is believed that all claims are now in condition for allowance. Applicants believe that the above response is a complete response to the Final Office Action. An early and favorable action on the merits is earnestly solicited. If however the Examiner believes that some requirement has been missed or not completely answered, or if he believes that a telephonic interview will advance the prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number provided below

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account.

Respectfully submitted,



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